INTERSECTION OPERATION

THE INTERSECTION WILL OPERATE IN A NEMA SIX-PHASE, FULLY-ACTUATED MODE WITH EXCLUSIVE-PERMISSIVE LEFT TURN PHASES FOR NORTHBOUND AND SOUTHBOUND US 11. THIS INTERSECTION WILL BE INTERCONNECTED TO THE EXISTING TRAFFIC SIGNAL AT US 11 AND MAUGANS AVENUE.

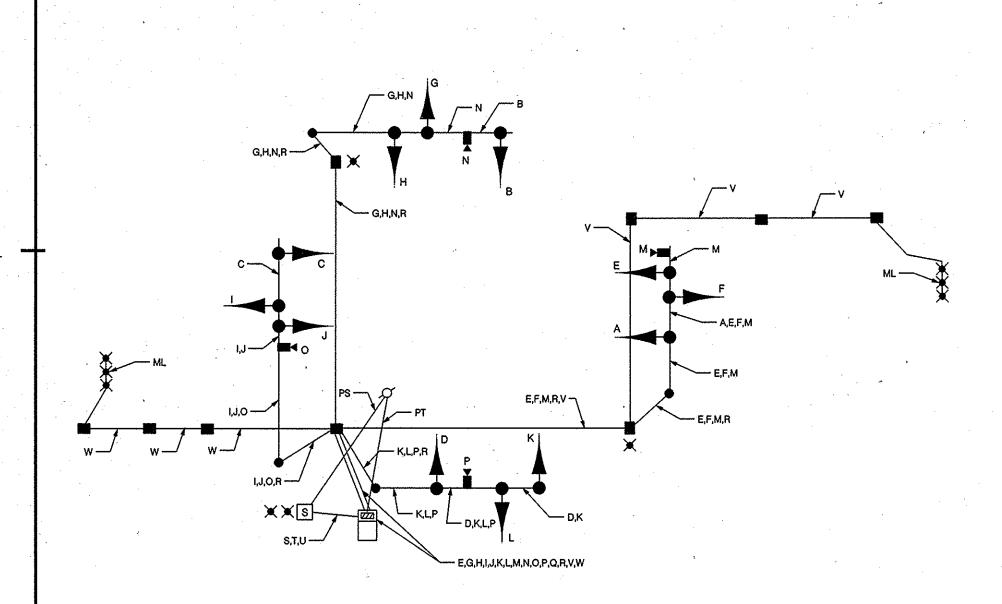
CONTROLLER REQUIREMENTS

INSTALL A FULL-TRAFFIC-ACTUATED, EIGHT-PHASE CONTROLLER WITH SYSTEM PACKAGE AND VIDEO DETECTION INTERFACE EQUIPMENT HOUSED IN A NEMA "6" BASE MOUNTED CABINET.

SPECIAL NOTE

UPON COMPLETION OF THIS PROJECT, THE CONTRACTOR SHALL NOTIFY MR. ROBERT SNYDER OF THE MSHA AT (410) 787-7635 TO ARRANGE FOR THE PHONE LINE INSTALLATION, THE CONTRACTOR MUST PROVIDE MR. SNYDER WITH THE NEAREST ADDRESS, ZIP CODE, AND PHONE NUMBER.

WIRING DIAGRAM



WIRING KEY

5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.) 7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.) VIDEO DETECTION CABLE 12-PAIR VOICE GRADE INTERCONNECT STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.) 1-CONDUCTOR ELECTRICAL CABLE (NO. 4 A.W.G.) MICRO-LOOP PROBE LEAD-IN PROPOSED ELECTRIC SERVICE GROUND ROD MICRO-LOOP PROBE

PROPOSED TELEPHONE DROP

EQUIPMENT LIST "A"

A EQUIPMENT TO BE FURNISHED BY THE SHA AND INSTALLED BY THE CONTRACTOR

<u>ITEM NO.</u> **QUANTITY DESCRIPTION**

NONE

EQUIPMENT LIST "B"

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY CONTRACTOR. ALL EQUIPMENT SHALL HAVE CATALOG CUTS SUBMITTED TO THE OFFICE OF TRAFFIC AND SAFETY FOR APPROVAL PRIOR TO INSTALLATION.

QUANTITY	<u>DESCRIPTION</u>
LS	MAINTENANCE OF TRAFFIC
5 CY	TEST PIT EXCAVATION
2 EA	FURNISH AND INSTALL HEAT APPLIED THERMOPLASTIC PAVEMENT MARKING ARROW
130 LF	FURNISH AND INSTALL 24 IN. WHITE HEAT APPLIED THERMOPLASTIC PAVEMENT MARKING
300 LF	FURNISH AND INSTALL 12 IN. WHITE HEAT APPLIED THERMOPLASTIC PAVEMENT MARKING
100 LF	FURNISH AND INSTALL 5 IN YELLOW HEAT APPLIED THERMOPLASTIC PAVEMENT MARKING
1400 LF	FURNISH AND INSTALL 5 IN WHITE HEAT APPLIED THERMOPLASTIC PAVEMENT MARKING
4 EA	FURNISH AND INSTALL 250 FT. VIDEO DETECTION CABLE
2 EA	CUT, CLEAN, AND CAP TRAFFIC SIGNAL STRUCTURE
32 EA	FURNISH AND INSTALL 12 IN. L.E.D. VEHICULAR SIGNAL HEAD SECTION
12 EA	FURNISH AND INSTALL 8 IN. L.E.D. VEHICULAR SIGNAL HEAD SECTION
2 EA	FURNISH AND INSTALL 16.5 FT. MAST ARM POLE AND 38 FT. MAST ARM (15 FT. "T" DIMENSION)
1 EA	FURNISH AND INSTALL 16.5 FT. MAST ARM POLE AND 60 FT. MAST ARM (15 FT. "T" DIMENSION)
1 EA	FURNISH AND INSTALL 27 FT. MAST ARM POLE AND 70 FT. MAST ARM
4 EA	FURNISH AND INSTALL VIDEO DETECTION CAMERA
1 EA	FURNISH AND INSTALL VIDEO INTERFACE EQUIPMENT
60 LF	FURNISH AND INSTALL 3 IN SCHEDULE 80 RIGID ELECTRICAL PVC CONDUIT - TRENCHED
20 LF	FURNISH AND INSTALL 2 IN SCHEDULE 80 RIGID ELECTRICAL PVC CONDUIT - TRENCHED
220 LF	FURNISH AND INSTALL 4 IN SCHEDULE 80 RIGID ELECTRICAL PVC CONDUIT - SLOTTED
820 LF	FURNISH AND INSTALL 4 IN SCHEDULE 80 RIGID ELECTRICAL PVC CONDUIT - TRENCHED
220 LF	FURNISH AND INSTALL 4 IN SCHEDULE 80 RIGID ELECTRICAL PVC CONDUIT - BORED
18 CY	FURNISH AND INSTALL CONCRETE FOR SIGNAL FOUNDATION
35 LF	FURNISH AND INSTALL WOOD SIGN SUPPORTS (4 IN. X 6 IN.)
220 LF	FURNISH AND INSTALL NO. 6 AWG STRANDED BARE COPPER WIRE
1 EA	FURNISH AND INSTALL METERED SERVICE PEDESTAL
70 LF	FURNISH AND INSTALL ELECTRICAL CABLE 1-CONDUCTOR (NO. 4 A.W.G.)
10 EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
1100 LF	FURNISH AND INSTALL 12-PAIR COMMUNICATION CABLE - UNDERGROUND
7 EA	FURNISH AND INSTALL GROUND ROD 3/4 IN. DIAMETER X 10 FT. LENGTH
100 LF	FURNISH AND INSTALL ELECTRICAL CABLE 5-CONDUCTOR (NO.14 A.W.G.)
1070 LF	FURNISH AND INSTALL ELECTRICAL CABLE 7-CONDUCTOR (NO. 14 A.W.G.)
1 EA	FURNISH AND INSTALL BASE MOUNTED CABINET AND CONTROLLER
1 EA	FURNISH AND INSTALL D3-2 DUAL FACE SIGN (VAR. X 16") - MAST ARM MOUNT
2 EA	FURNISH AND INSTALL M95-1/D3-2 SIGN (72" X 40") - MAST ARM MOUNT
2 EA	FURNISH AND INSTALL W3-3 SIGN (36" X 36") WITH "NEW" PANEL (30" X 30") - GROUND MOUNT
3 EA	FURNISH AND INSTALL STANDARD SIDEWALK RAMP WITH DETECTABLE WARNING SURFACE
1 EA	FURNISH AND INSTALL FOUR-CHANNEL TIME DELAY OUTPUT LOOP DETECTOR AMPLIFIER
1 EA	FURNISH AND INSTALL MICRO-LOOP PROBE WITH 500 FT. LEAD-IN
1 EA	FURNISH AND INSTALL MICRO-LOOP PROBE WITH 1000 FT. LEAD-IN
15 LF	FURNISH AND INSTALL 1 IN. LIQUID-TIGHT NON-METALLIC CONDUIT-DETECTOR SLEEVE
100 LF	FURNISH AND INSTALL SAWCUT
100 LF	REMOVE EXISTING PAVEMENT MARKING

EQUIPMENT LIST "C"

C. EXISTING EQUIPMENT TO BE REMOVED BY THE CONTRACTOR AND DELIVERED TO THE STATE HIGHWAY ADMINISTRATION, 7491 CONNELLEY DRIVE, HANOVER, MARYLAND 21076. THE CONTRACTOR SHALL NOTIFY THE SHA AT (410) 787-7652 AT LEAST THREE DAYS IN ADVANCE OF DELIVERY.

ITEM NO. <u>QUANTITY</u>

NONE

ALL SIGNAL EQUIPMENT TO BE REMOVED AND NOT RETURNED TO THE SHA SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

DESCRIPTION

CONTACT PERSONS FOR DISTRICT 6 ARE AS FOLLOWS:

MR. GEORGE SMALL

MR. GEORGE FRANKENBURY

ASSISTANT DISTRICT ENGINEER - TRAFFIC (301) 729-8444

ASSISTANT DISTRICT ENGINEER - MAINTENANCE

(301) 729-8457

MR. LARRY HUMBERTSON

ASSISTANT DISTRICT ENGINEER - UTILITIES (301) 729-8439

CONTACTS FOR OFFICE OF TRAFFIC AND SAFETY

MR. RICHARD DAFF, SR. CHIEF, TRAFFIC OPERATIONS

(410) 787-7630

MR. ROBERT SNYDER ASSISTANT DIVISION CHIEF, TRAFFIC OPERATIONS

(410) 787-7631

(410) 787-7652

MR. ED RODENHIZER TEAM LEADER SIGNAL OPERATIONS MR. EUGENE BAILEY TEAM LEADER SIGN OPERATIONS

(410) 787-7676

MS. DARLENE EIDE SUPPLY OFFICE SIGNAL SHOP WAREHOUSE (410) 787-7668

PHASE CHART

1 2 3 4 5 6 7 8 9 10 11 12 (***) (

PHASE 1 & 5	R +G-	R ← G−	R	R G−	+G−	R G	R	R	R	R	R	R	1
1 & 5 CHANGE	PHAS	PHASE 1 & 5 MAY CHANGE TO PHASE 1 & 6, 2 & 5, OR 2 & 6											F. (,
PHASE 1 & 6	R ← G−	R ∢ G−	G	R	R	R	R	R	R	R	R	R	<u> </u>
1 & 6 CHANGE	R ◆Y~	₽ + Y	G	R	R	R	R	R	R	R	R	R	∤
PHASE 2 & 5	R	R	R	R ◆G	R ← G−	G	R	R	R	R	R	R	<i>* /</i> ·
2 & 5 CHANGE	R	R	R	R 4 -Y	R ← Y	G	R	R	R	R	R	R	
PHASE 2 & 6	G	G	G	G	G	G	R	R	R	R	R	R	<u> </u>
2 & 6 CHANGE	Y	Υ	Υ	Υ	Υ	Υ	R	R	R	R	R	R	
PHASE 4 & 8	R	R	R	R	R	R	G	G	G	G	G	G	1
4 & 8 CHANGE	R	R	R	R -	R	R	Υ	Υ	Υ	Υ	Y	Υ	<u> </u>
FLASHING OPERATION	FLY	FLY	FLY	FLY	FLY	FLY	FLR	FLR	FLR	FLR	FLR	FLR	L ,

STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF TRAFFIC & SAFETY TRAFFIC ENGINEERING DESIGN DIVISION

GENERAL INFORMATION PLAN US 11 AND NORTH POINTE DRIVE

HAGERSTOWN, MARYLAND

CONTRACT NO. BW996M82 SCALE NONE DATE 11-10-06 WASHINGTON F.A.P. NO.

DRAWING NO. TS-260G GI

SHEET NO. 4 OF 4

CONCEPTS INC. **T**RAFFIC 325 Gambrills Road

Suite E Gambrills, MD 21054 (410) 923–7101

FAX (410) 923-6473 EMAIL TRAFFIC.CONCEPTS@COMCAST.NET